



USER MANUAL

SCL255S DMX SCANNER



CE



CAUTION!

Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!

For your own safety, please read this user manual carefully before you initially start-up.

Every person involved with the installation, operation and maintenance of this device has to

- be qualified
- follow the instructions of this manual
- consider this manual to be part of the total product
- keep this manual for the entire service life of the product
- pass this manual on to every further owner or user of the product
- download the latest version of the user manual from the Internet

INTRODUCTION

Thank you for having chosen SCL255S. You will see you have acquired a powerful and versatile device.

Unpack your SCL255S.

Delivery includes

1	Device	
1	User manual	
1	IEC-cable	

SAFETY INSTRUCTIONS



CAUTION!

Be careful with your operations. With a dangerous voltage you can suffer a dangerous electric shock when touching the wires!

This device has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this user manual.



Important:

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.

Please make sure that there are no obvious transport damages. Should you notice any damages on the A/C connection cable or on the casing, do not take the device into operation and immediately consult your local dealer.

This device falls under protection-class I. The power plug must only be plugged into a protection class I outlet. The voltage and frequency must exactly be the same as stated on the device. Wrong voltages or power outlets can lead to the destruction of the device and to mortal electrical

shock.

Always plug in the power plug last. The power plug must always be inserted without force. Make sure that the plug is tightly connected with the outlet.

Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution! Never touch them with wet hands, as this could lead to mortal electrical shock.

Never modify, bend, strain mechanically, put pressure on, pull or heat up the power cord. Never operate next to sources of heat or cold. Disregard can lead to power cord damages, fire or mortal electrical shock.

The cable insert or the female part in the device must never be strained. There must always be sufficient cable to the device. Otherwise, the cable may be damaged which may lead to mortal damage.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time.

If extension cords are used, make sure that the core diameter is sufficient for the required power consumption of the device. All warnings concerning the power cords are also valid for possible extension cords.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord. Otherwise, the cable or plug can be damaged leading to mortal electrical shock. If the power plug or the power switch is not accessible, the device must be disconnected via the mains.

If the power plug or the device is dusty, the device must be taken out of operation, disconnected and then be cleaned with a dry cloth. Dust can reduce the insulation which may lead to mortal electrical shock. More severe dirt in and at the device should only be removed by a specialist.

There must never enter any liquid into power outlets, extension cords or any holes in the housing of the device. If you suppose that also a minimal amount of liquid may have entered the device, it must immediately be disconnected. This is also valid, if the device was exposed to high humidity. Also if the device is still running, the device must be checked by a specialist if the liquid has reduced any insulation. Reduced insulation can cause mortal electrical shock.

There must never be any objects entering into the device. This is especially valid for metal parts. If any metal parts like staples or coarse metal chips enter into the device, the device must be taken out of operation and disconnected immediately. Malfunction or short-circuits caused by metal parts may cause mortal injuries.

During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.

Caution: During the operation, the housing becomes very hot.

Do not switch the device on and off in short intervals as this would reduce the lamp's life.



HEALTH HAZARD!

Never look directly into the light source, as sensitive persons may suffer an epileptic shock (especially meant for epileptics)!

Keep away children and amateurs!

Never leave this device running unattended.

OPERATING DETERMINATIONS

This device is a lighting effect for creating decorative effects. This product is only allowed to be operated with an alternating voltage of 230 V, 50 Hz and was designed for indoor use only.

This device is designed for professional use, e.g. on stages, in discotheques, theatres etc.

Lighting effects are not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

Do not shake the device. Avoid brute force when installing or operating the device.

When choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be any cables lying around. You endanger your own and the safety of others!

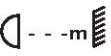
This device must never be operated or stockpiled in surroundings where splash water, rain, moisture or fog may harm the device. Moisture or very high humidity can reduce the insulation and lead to mortal electrical shocks. When using smoke machines, make sure that the device is never exposed to the direct smoke jet and is installed in a distance of 0.5 meters between smoke machine and device. The room must only be saturated with an amount of smoke that the visibility will always be more than 10 meters.

The ambient temperature must always be between -5°C and $+45^{\circ}\text{C}$. Keep away from direct insulation (particularly in cars) and heaters.

The relative humidity must not exceed 50 % with an ambient temperature of 45°C .

This device must only be operated in an altitude between -20 and 2000 m over NN.

Never use the device during thunderstorms. Over voltage could destroy the device. Always disconnect the device during thunderstorms.

The symbol  determines the minimum distance from lighted objects. The minimum distance between light-output and the illuminated surface must be more than 0.5 meters.

This device is only allowed for an installation via the mounting bracket. In order to safeguard sufficient ventilation, leave 50 cm of free space around the device.

The housing must never touch surrounding surfaces or objects.

Make sure that the area below the installation place is blocked when rigging, derigging or servicing the fixture.

Always fix the fixture with an appropriate safety-rope.

The maximum ambient temperature $T_a = 45^{\circ}\text{C}$ must never be exceeded.

Operate the device only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation!

Never use solvents or aggressive detergents in order to clean the device! Rather use a soft and damp cloth.

Please use the original packaging if the device is to be transported. Make sure that you pack the device in the original state.

Please consider that unauthorized modifications on the device are forbidden due to safety reasons!

Never remove the serial barcode from the device as this would make the guarantee void.

If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock, lamp explosion, crash etc.

DESCRIPTION OF THE DEVICE

Features

- DMX scanner
- 7 different, dichroic colour-filtres and white
- Rainbow-effect with adjustable speed in both directions
- Gobo-wheel with 7 rotating gobos, open
- Strobe-effect with adjustable speed via shutter
- DMX-controlled operation or stand alone operation with Master/Slave-function
- 3-facet-prism, rotate in both directions and at different speeds
- Sound-controlled via built-in microphone
- Control-Board with LCD-display and encoder for addressing & Pan/Tilt-Reverse
- Motorized focus
- For extremely bright MSD250W lamp
- DMX-control via every standard DMX-controller

Overview



INSTALLATION

Installing/Replacing the lamp



DANGER TO LIFE!

Only install the lamp with the device switched off!
Unplug from mains before!

For the installation, you need one HMI 575 95V/575W SFC-10 lamp.

The lamp must only be changed when wearing appropriate protective clothing (protection glasses, protection gloves, helmet with sight, leather apron).



CAUTION!

The lamp has to be replaced when it is damaged or deformed due to the heat!

The lamp life given by the manufacturer must never be exceeded. This is why you need to take notes on the operational time of the lamp and replace the lamp in time. Keep exchanged lamp in a protective container and remove accordingly. During the operation, the lamp reaches temperatures of up to 600° C.

Before replacing the lamp, unplug mains lead and let the lamp cool down (approx. 10 minutes).

During the installation do not touch the glass-bulbs bare-handed! Please follow the lamp manufacturer's notes!

Do not install lamps with a higher wattage! Lamps with a higher wattage generate temperatures the device was not designed for. Damages caused by non-observance are not subject to warranty.

Procedure:

- Step 1: Carefully unscrew the four housing screws at the rear part of the appliance and remove the housing cover.
- Step 2: Unscrew the knurled-head screws of the lamp.
- Step 3: If replacing the lamp, remove the old lamp from the lamp holder.
- Step 4: Insert the lamp into the lamp holder.
- Step 5: Tighten both knurled-head screws.
- Step 6: Replace the housing cover and tighten the housing screws.

Overhead rigging



DANGER TO LIFE!

Please consider the EN 60598-2-17 and the respective national norms during the installation! The installation must only be carried out by an authorized dealer!

The installation of the device has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.

The installation must always be secured with a secondary safety attachment, e.g. an appropriate catch net. This secondary safety attachment must be constructed in a way that no part of the installation can fall down if the main attachment fails.

When rigging, de rigging or servicing the device staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert after every four year in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are approved by a skilled person once a year.

Procedure:

The device should be installed outside areas where persons may walk by or be seated.

IMPORTANT! OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE, including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the device. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury and or damage to property.

The device has to be installed out of the reach of people.

If the device shall be lowered from the ceiling or high joists, professional trussing systems have to be used. The device must never be fixed swinging freely in the room.

Caution: Devices in hanging installations may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do NOT install the device!

Before rigging make sure that the installation area can hold a minimum point load of 10 times the device's weight.



DANGER OF FIRE!

When installing the device, make sure there is no highly—inflammable material(decoration articles,etc.)within a distance of min.0.5m.

Mount the device to your trussing system using an appropriate clamp. For overhead use, always install a safety-rope that can hold at least 12 times the weight of the fixture. You must only use safety-ropes with quick link with screw cap. Pull the safety-rope through the attachment eyelet

and over the trussing system or a safe fixation spot. Insert the end in the quick link and tighten the safety screw. The maximum drop distance must never exceed 20 cm. A safety rope which already held the strain of a crash or which is defective must not be used again. Adjust the desired inclination-angle via the mounting-bracket and tighten the fixation screws.



DANGER OF FIRE!

Before taking into operation for the first time, the installation has to be approved by an expert!

Master/Slave-operation

The master/slave-operation enables that several devices can be synchronized and controlled by one master-device.

On the rear panel of the SCL255S you can find an XLR-jack (DMX Out) and an XLR-plug (DMX In), which can be used for connecting several devices.

Choose the device which is to control the effects. This device then works as master-device and controls all other slave-devices, which are to be connected to the master-device via a balanced microphone lead. Connect the DMX OUT-jack with the DMX IN-plug of the next device.

Set the desired Master-mode - „No DMX Sound“ or „No DMX Auto“ - for the master-device. Set the DMX address 1 for all slave-devices.

Control Board/LCD menu

When there is no DMX signal, there are two running modes:

No DMX Sound	Sound-controlled mode when there is no DMX signal. To select this function, first No DMX disconnect DMX connection, then press encoder and turn it counter-clock-wise. Press it again confirm.
No DMX Auto	Automatic program mode when there is no DMX signal. To select this function, first DMX disconnect DMX connection, then press encoder and turn it counter-clock-wise. Press it again confirm.

DMX address:

Addr 001	To set DMX address for the device, press the encoder and turn it clock-wise to increase the value and counter-clockwise to decrease it. Press encoder again to confirm
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Pan/Tilt reverse:

Reverse Tilt Y	Tilt Reverse. Press encoder and turn it counter-clock-wise. Press it again to confirm.
Reverse Tilt N	Tilt Obverse. Press encoder and turn it clock-wise. Press it again to confirm.
Reverse Pan Y	Pan Reverse. Press encoder and turn it counter-clock-wise. Press it again to confirm.
Reverse Pan N	Pan Obverse. Press encoder and turn it clock-wise. Press it again to confirm.

Chase speed:

Chase Speed001	To set Chase Speed, press encoder and turn it clock-wise to increase the value(faster) and counter-clockwise to decrease the value(slower). Press it again to confirm
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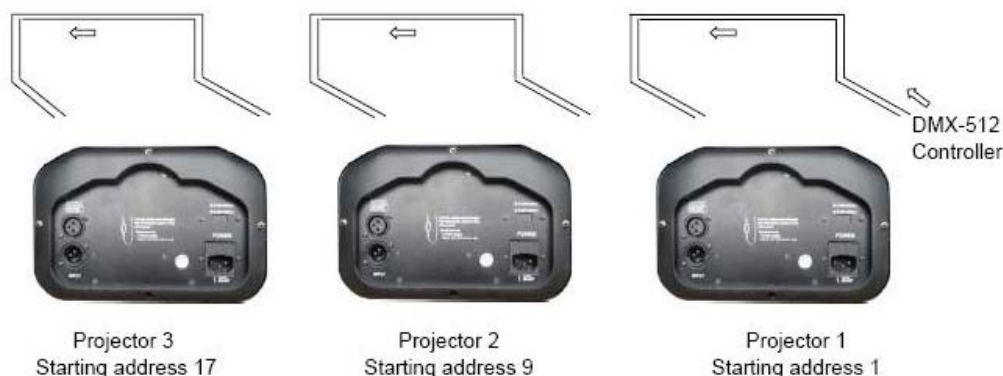
Control LED:

Red: Power on

Yellow: DMX Out (Sound/Auto mode)

Green: DMX In

DMX-512 connection / connection between fixtures



The wires must not come into contact with each other, otherwise the fixtures will not work at all, or will not work properly.



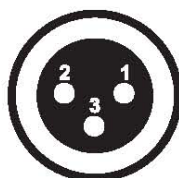
Please note, the starting address depends upon which controller is being used.



Only use a stereo shielded cable and 3-pin XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

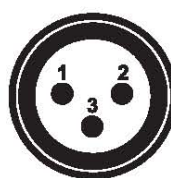
Occupation of the XLR-connection:

DMX-output XLR mounting-socket:



1: Ground
2: Signal (-)
3: Signal (+)

DMX-input XLR mounting-plug:



1: Ground
2: Signal (-)
3: Signal (+)

If you are using controllers with this occupation, you can connect the DMX-output of the controller directly with the DMX-input of the first fixture in the DMX-chain. If you wish to connect DMX-controllers with other LR-outputs, you need to use adapter-cables.

Building a serial DMX-chain:


Connect the DMX-output of the first fixture in the DMX-chain with the DMX-input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected.

Caution: At the last fixture, the DMX-cable has to be terminated with a terminator. Solder a 120 Ω resistor between Signal (-) and Signal (+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.

Connection with the mains

Connect the device to the mains with the enclosed power supply cable.

The occupation of the connection-cables is as follows:

Cable	Pin	International
Brown	Live	L
Blue	Neutral	N
Yellow/Green	Earth	

The earth has to be connected!

If the device will be directly connected with the local power supply network, a disconnection switch with a minimum opening of 3 mm at every pole has to be included in the permanent electrical installation.

The device must only be connected with an electric installation carried out in compliance with the IEC-standards. The electric installation must be equipped with a Residual Current Device (RCD) with a maximum fault current of 30 mA.

Lighting effects must not be connected to dimming-packs.

OPERATION

After you connected the effect to the mains, the SCL255S starts running. During the Reset, the motors are trimmed and the device is ready for use afterwards.

Stand Alone operation

In the Stand Alone mode, the SCL255S can be used without controller. You can do without a controller as the SCL255S features a built-in microphone, which provides automatic sound control.

Disconnect the SCL255S from the controller and select the desired "Master Mode".

If you have connected a footswitch to the Blackout-socket, you can lock the light output (Blackout-mode) and turn it on again.

Master/Slave-operation

Connect the master and slave-devices and adjust the settings as described above.

DMX-controlled operation

You can control the projectors individually via your DMX-controller. Every DMX-channel has a different occupation with different features. In order to call up the different features, you first have to open the light output (control channel 6, DMX-value 250-255).

Addressing

The Control Board allows you to assign the DMX fixture address, which is defined as the first channel from which the SCL255S will respond to the controller.

Please, be sure that you don't have any overlapping channels in order to control each SCL255S correctly and independently from any other fixture on the DMX data link.

If two, three or more SCL255S are addressed similarly, they will work similarly.

To set DMX address for the device, press the encoder and turn it clock-wise to increase the value and counter-clockwise to decrease it. Press encoder again to confirm.

Controlling:

After having addressed all SCL255S, you may now start operating these via your lighting controller.

Note:

After switching on, the SCL255S will automatically detect whether DMX 512 data is received or not. If the data is received, the green control LED lights up. If there is no data received at the DMX-input, the yellow control LED lights up. This situation can occur if:

- the 3 PIN XLR plug (cable with DMX signal from controller) is not connected with the input of the DJ-SCAN 600.
- the controller is switched off or defective, if the cable or connector is defective or the signal wires are swap in the input connector.

It's necessary to insert the XLR termination plug (with 120 Ohm) in the last lighting in the link in order to ensure proper transmission on the DMX data link.

DMX-protocol**Control-channel 1 - Shutter, Strobe**

0-128	Gradual adjustment of the dimmer intensity from 0 to 100 %
129-133	No function (Shutter open)
134-243	Random strobe effect with decreasing speed
244-249	Shutter close
250-255	Shutter open

Control-channel 2 - Colour-wheel

0-15	White
16-31	Magenta
32-47	Yellow
48-63	Orange
64-79	Green
80-95	Red
96-111	Blue
112-127	Violet
128-191	Forwards rainbow effect with increasing speed
192-255	Backwards rainbow effect with increasing speed

Control-channel 3 – Rotating-Gobo-wheel

0-15	Open
16-31	Gobo 1
32-47	Gobo 2
48-63	Gobo 3
64-79	Gobo 4
80-95	Gobo 5
96-111	Gobo 6
112-127	Gobo 7
128-127	Forwards gobo-change with increasing speed
192-255	Backwards gobo-change with increasing speed

Control-channel 4 - Gobo rotation

0-15	No rotation
16-135	Forwards gobo rotation with increasing speed
136-255	Backwards gobo rotation with increasing speed

Control-channel 5 - Horizontal movement (Pan)

Push slider up in order to move the mirror horizontally (PAN). Gradual mirror adjustment from one end of the slider to the other (0-255, 128-center). The mirror can be stopped at any position you

wish.

Control-channel 6 - Vertical movement (Tilt)

Push slider up in order to move the mirror vertically (TILT). Gradual mirror adjustment from one end of the slider to the other (0-255, 128-center). The mirror can be stopped at any position you wish.

Control-channel 7 – Prism rotation

0-63	No function
64-159	Forwards rotation 3-facet-prism with increasing speed
160-255	Backwards rotation 3-facet-prism with increasing speed

Control-channel 8 - Focus

0-255	Continuous adjustment from near to far
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CLEANING AND MAINTENANCE

The operator has to make sure that safety-relating and machine-technical installations are inspected by an expert after every four years in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are inspected by a skilled person once a year.

The following points have to be considered during the inspection:

- 1) All screws used for installing the devices or parts of the device have to be tightly connected and must not be corroded.
- 2) There must not be any deformations on housings, fixations and installation spots (ceiling, suspension, trussing).
- 3) Mechanically moved parts like axles, eyes and others must not show any traces of wearing (e.g. material abrading or damages) and must not rotate with unbalances.
- 4) The electric power supply cables must not show any damages, material fatigue (e.g. porous cables) or sediments. Further instructions depending on the installation spot and usage have to be adhered by a skilled installer and any safety problems have to be removed.



DANGER OF LIFE!

Disconnect from mains before starting maintenance operation!

We recommend a frequent cleaning of the device. Please use a moist, lint-free cloth. Never use alcohol or solvents!



CAUTION!

The lens has to be replaced when it is obviously damaged, So that its function is impaired, e.g. due to cracks or deep scratches!

The objective lens will require weekly cleaning as smoke-fluid tends to building up residues, reducing the light-output very quickly. The cooling-fans should be cleaned monthly. The gobos may be cleaned with a soft brush. The interior of the fixture should be cleaned at least annually using a vacuum-cleaner or an air-jet. The dichroic colour-filters, the gobo-wheel and the internal lenses should be cleaned monthly. To ensure a proper function of the gobo-wheel, we recommend lubrication in six month intervals. The quantity of oil must not be excessive in order to avoid that

oil runs out when the gobo-wheel rotates. There are no serviceable parts inside the device. Maintenance and service operations are only to be carried out by authorized dealers. Please refer to the instructions under "Installing/Replacing the lamp".

Replacing the fuse

If the fine-wire fuse of the device fuses, only replace the fuse by a fuse of same type and rating.

Before replacing the fuse, unplug mains lead.

Procedure:

Step 1: Open the fuse holder on the rear panel with a fitting screw driver.

Step 2: Remove the old fuse from the fuse holder.

Step 3: Install the new fuse in the fuse holder.

Step 4: Replace the fuse holder in the housing.

Should you need any spare parts, please use genuine parts.

If the power supply cable of this device becomes damaged, it has to be replaced by a special power supply cable available at your dealer.

Should you have further questions, please contact your dealer.

TECHNICAL SPECIFICATIONS

Power supply:	230 V AC, 50 Hz ~
Power consumption:	350 W
DMX-control-channels:	8
DMX-512-connection:	3-pin XLR
Sound-control:	via built-in microphone
Flash-rate:	10 Hz
Number of colours:	7 dichroic + white
Number of gobos:	7 rotating gobos and open
Outside diameter of the gobos:	28 mm
Image diameter of the gobos:	22.5 mm
Dimensions (LxWxH):	535 x 295 x 180 mm
Weight:	16kg
Maximum ambient temperature Ta:	45° C
Maximum housing temperature TB (steady state):	95 ° C
Min.distance from flammable surfaces:	0.5 m
Min.distance to lighted object:	0.5 m
Fuse:	5 A, 250 V

Please note: Every information is subject to change without prior notice.

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